

IN THE CLAIMS

1. (Previously presented) An electric vehicle, comprising:
one or more electric motors and/or generators,
wherein at least one motor and/or generator is an adaptive electric machine comprising two or more electromagnetic power circuits that provide power to the at least one or more motor and/or generator, and are sufficiently isolated to substantially eliminate electromagnetic and electrical interference between the circuits.

2. (Previously Presented) A vehicle, comprising:
two more wheels, and
one or more electric motors, each mounted in an in-wheel, near-wheel, or direct-drive manner,
wherein at least one motor is an in-wheel motor with torque density of at least 20 Nm/kg and comprises a multiphase machine having a rotor, a stator, the stator comprising a plurality of stator core elements, the plurality of stator core elements being arranged in groups, each group of stator core elements being associated with a corresponding one of the phases of the multiphase machine, the stator core elements in each group being structurally and electromagnetically isolated from the stator core elements in each other group to substantially eliminate electromagnetic and electrical interference, and a controller for controlling electrical flow in each group of stator core elements independently of electrical flow in each other group, whereby each phase of the multiphase machine is controlled independently of each other phase.

3. (Previously presented) The electric vehicle of claim 1 which has an internal combustion engine, steam engine, or turbine engine connected to an electric generator and arranged in a series hybrid configuration with the one or more electric motors and/or generators.

4. (Previously presented) The electric vehicle of claim 1 which has an internal combustion engine, steam engine, or turbine engine arranged in a series or parallel hybrid configuration with the one or more electric motors and/or generators.

5. (Previously presented) The electric vehicle of claim 1 which has a fuel cell arranged in a series hybrid configuration with the one or more electric motors and/or generators.

6. (Previously presented) The electric vehicle of claim 1 with a separate battery for each motor and/or generator.

7. (Previously presented) The electric vehicle of claim 1 with:
a separate battery for each electric motor and/or generator,
a gasoline engine, steam engine, or turbine engine/generator module to produce electrical power to charge the batteries,
a user interface to get input from the driver of the vehicle, and
a central controller that controls operation of the motors, batteries, and gasoline engine, steam engine, or turbine engine/generator module.

8. (Previously presented) The vehicle of claim 2 which has an internal combustion engine, steam engine, or turbine engine connected to an electric generator and arranged in a series hybrid configuration with the one or more electric motors.

9. (Previously presented) The vehicle of claim 2 which has an internal combustion engine, steam engine, or turbine engine arranged in a series or parallel hybrid configuration with the one or more electric motors.

10. (Previously presented) The vehicle of claim 2 which has a fuel cell arranged in a series hybrid configuration with the one or more electric motors.

11. (Previously presented) The vehicle of claim 2 with a separate battery for each motor.

12. (Previously presented) The vehicle of claim 2 with:
a separate battery for each electric motor,
a gasoline engine, steam engine, or turbine engine/generator module to produce electrical power to charge the batteries,
a user interface to get input from the driver of the vehicle, and
a central controller that controls operation of the motors, batteries, and gasoline engine, steam engine, or turbine engine/generator module.

13. (New) A system, comprising:
a series hybrid vehicle, the vehicle having one or more electric motors and/or generators, wherein at least one motor and/or generator is an adaptive electric machine comprising two or more electromagnetic power circuits that provide power to the at least one or more motor and/or generator, and are sufficiently isolated to substantially eliminate electromagnetic and electrical interference between the circuits.

14. (New) A system, comprising:
a series hybrid vehicle having two more wheels and one or more electric motors, each motor mounted in an in-wheel, near-wheel, or direct-drive manner,
wherein at least one motor is an in-wheel motor with torque density of at least 20 Nm/kg and comprises a multiphase machine having a rotor, a stator, the stator comprising a plurality of stator core elements, the plurality of stator core elements being arranged in groups, each group of stator core elements being associated with a corresponding one of the phases of the multiphase machine, the stator core elements in each group being isolated from the stator core elements in each other group to substantially eliminate electromagnetic and electrical interference, and a controller for controlling electrical flow in each group of stator core elements independently of electrical flow in each other group, whereby each phase of the multiphase machine is controlled independently of each other phase.

15. (New) A method of transportation, comprising:
propelling a series hybrid vehicle, the vehicle having one or more electric motors and/or generators, wherein at least one motor and/or generator is an adaptive electric machine

comprising two or more electromagnetic power circuits that provide power to the at least one or more motor and/or generator, and are sufficiently isolated to substantially eliminate electromagnetic and electrical interference between the circuits.

16. (New) A method of transportation, comprising:

propelling a series hybrid vehicle having two more wheels and one or more electric motors, each motor mounted in an in-wheel, near-wheel, or direct-drive manner,

wherein at least one motor is an in-wheel motor with torque density of at least 20 Nm/kg and comprises a multiphase machine having a rotor, a stator, the stator comprising a plurality of stator core elements, the plurality of stator core elements being arranged in groups, each group of stator core elements being associated with a corresponding one of the phases of the multiphase machine, the stator core elements in each group being isolated from the stator core elements in each other group to substantially eliminate electromagnetic and electrical interference, and a controller for controlling electrical flow in each group of stator core elements independently of electrical flow in each other group, whereby each phase of the multiphase machine is controlled independently of each other phase.